

***LineUp With Math™* Alignment**  
**Mathematics Content Standards and Objectives**

**Standard 1: Number and Operations (MA.S.1)**

Students will:

- demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- demonstrate meanings of operations and how they relate to one another; and
- compute fluently and make reasonable estimates

through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

**Number and Operations Objectives**

Students will:

MA.8.1.5 use estimation techniques with whole numbers, decimals, percent, fractions and mixed numbers to solve and verify solutions in application problems.

***LineUp With Math™* Activities**

--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

MA.8.1.6 solve application problems with whole numbers, decimals, fractions, percents and integers including, but not limited to, rates, tips, discounts, sales tax and interest.

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

--Use percent relationships to resolve distance, rate, time conflicts in air traffic control.

**Standard 2: Algebra (MA.S.2)**

Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts

through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

**Algebra Objectives**

Students will:

MA.8.2.3 use ratio and proportion to create and solve equations.

***LineUp With Math™* Activities**

--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

MA.8.2.10 represent and solve real world problems appropriate for 8 <sup>th</sup> grade using multiple strategies.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.  --Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.
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